10/774790

(055) What is claimed is: '

- (1) (Original) A manual electro-hydraulic selective depth control system for establishing a set position of a device above the ground as the device is moved across a surface, the selective depth control comprising:
- a. a toggle input device for specifying a plurality of position settings;
- b. a device position sensor for determining a measured device position; and
- c. a hydraulic position control system having a programmable ground zero position and a programmable maximum depth position for the device, the hydraulic position control system maintains the current position corresponding to the measured device position within a specified position within a specified position window around a set position programmed relative to the ground-zero and maximum-depth position;
- d. wherein the toggle input device comprises:
- e. a working position that places the set position at a programmed position;
- f. a shallow position that places the set position at a minimum deployed depth;
- g. a zero position that places the remote solenoid in a permanent de-energized mode.
- (2) (Original) The manual electro-hydraulic selective depth control system according to claim 1 wherein the toggle input device further comprises a window size control input for specifying a size for the position window use by the hydraulic control system.
- (3) (Original) The manual electro-hydraulic selective depth control system according to claim 1, wherein the device position sensor is a potentiometer-based system.
- (4) (Original) The manual electro-hydraulic selective depth control system according to claim 1, wherein the device position sensor is an ultra-sonic transducer-based system.
- (5) (Original) The manual electro-hydraulic selective depth control system according to

claim 1, wherein the toggle input device further comprises:

- a. a set switch for setting the programmed position used when the toggle is in its current position to a new position of the device; and
- b. an up/down rocker switch for adjusting the current position of the device.
- (6) (Original) The manual electro-hydraulic selective depth control system according to claim 5, wherein the shallow deployed depth corresponds to a programmable position having a default position 1.5 inches deeper than the ground-zero position.
- (7) (Original) The manual electro-hydraulic selective depth control system according to claim 5, wherein the function of shallow position is slaved to the function of the working position in that a manual raise function of the hydraulic power source will move the set position from the programmed working position automatically to the set position of the shallow position.
- (8) (Original) The manual electro-hydraulic depth control system according to claim 5, wherein the programmed working position corresponds to a programmable position having a default position 3.0 inches deeper than the ground-zero position.
- (9) (Original) The manual electro-hydraulic selective depth control system according to claim 1, wherein the manual electro-hydraulic selective depth control system further comprises a device position display unit comprising a numeric LED display element.
- (10) (Original) The manual electro-hydraulic selective depth control system according to claim 9, wherein the numeric LED display element show depth in inches with a decimal point to show 1/10 of an inch.

(11) (Original) The manual electro-hydraulic selective depth control system according to claim 1, wherein the hydraulic control system further comprises a remote two-way, two position, normally open solenoid valve.

- (12) (Canceled) A manual electro-hydraulic selective depth control system for establishing a set position of a device above the ground as the device is moved across a surface, the selective depth control system comprising:
- a. a processor based unit; and
- b. a remote control unit; and,
- c. a three position toggle input device.

(New) A manual electro-hydraulic selective depth control system for establishing a set position of a device above the ground as the device is moved across a surface, the selective depth control system comprising:

- a. an input device wherein the function of shallow position is not slaved to the function of the working position;
- b. an input device wherein the function of the working position is slaved to the function of the shallow position; and
- c. an input device wherein the function of the working position and the shallow position are not slaved.

(13) (Original) The manual electro-hydraulic selective depth control system according to claim 12, wherein the function of shallow position is not slave to the function of the working position thereby having its own programmable depth, and in that a manual raise function of the hydraulic power source will move the set position from the shallow position to a full raise position.

(Original) The manual electro-hydraulic selective depth control system according to

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claim 12, wherein the function of the working position is slaved to the function of the shallow position in that a manual raise function of the hydraulic power source will move the set position from the shallow programmed position automatically to the set position of the working position.

(15) (Original) The manual electro-hydraulic selective depth control system according to claim 12, wherein the function of the working position and the shallow position are not slaved and a manual raise function of the hydraulic power source will move the set position from the working position and shallow position to a full raise position.

(16) (Canceled) A manual electro-hydraulic selective depth control system for establishing a set position of a device above the ground as the device is moved across a surface, the selective depth control system comprising:

- a. an input device for specifying a plurality of position settings;
- b. a device position sensor;
- c. a processor control unit;
- d. a console control unit;
- e. a device position display unit; and
- f. one or more hydraulic manifolds having a solenoid valve.

(16) (New) A manual electro-hydraulic selective depth control system for establishing a set position of a device above the ground as the device is moved across a surface, the selective depth control system comprising:

- a. a hydraulic manifold wherein a counter-balance valve is coupled to a solenoid activated valve, and a pressure reducing and relieving valve and check valve;
- b. a hydraulic manifold wherein a counter-balance valve is coupled to a solenoid activated valve, and a check valve; and